# Critical Evaluation of Information Sources

**True or false:**   
I can trust information that is published because it has been reviewed by someone other than the author: an editor, a peer reviewer, a publisher, or an institution.

Most people would probably agree with this, except perhaps when referring to the Internet (where many might disagree). In reality the world of information is rarely so black and white. Consider the following:

* In the mid-1990s, a story started circulating around the Internet about the Oregon Department of Transportation's attempts to [use dynamite to dispose of a dead whale carcass](http://www.snopes.com/critters/disposal/whale.htm). This story happens to be true, incredible as it may seem, although it happened in 1970.
* Also in the mid-1990s, a physics professor named Alan Sokal submitted a [nonsense article](http://www.physics.nyu.edu/faculty/sokal/) to [Social Text](http://janus.uoregon.edu/search/tsocial+text/tsocial+text/1,3,4,B/frameset&FF=tsocial+text&2,,2), a peer-reviewed journal of cultural studies, which subsequently published the article. He revealed the prank soon after in another journal.
* A web site that appeared to be sponsored by the [Mankato Area Chamber & Convention Bureau](http://www.city-mankato.us/) extolled the various area attractions, which included whale watching on the Minnesota River (okay, let's just think about that one for a minute). In reality, the web site was created in 1999 by a professor at Mankato State University to underscore the importance of critically evaluating information found on the Internet.

These examples highlight the need for personal evaluation of information sources, whether they are found online, in print, or in some other form. In evaluating the credibility of an information source there are several key areas to consider:

* the **Authority** of the author and the publisher: Are they well qualified to speak to the topic at hand?
* the **Objectivity** of the author
* the **Quality** of the work
* **Coverage** of the work
* **Currency**: How recently was the research done and the work published?

The tables below provide a framework for investigating these aspects of an information source, whether it be an article in a journal, newspaper, or encyclopedia; a book; a web site; a government document; a food container; or any other source upon which you're relying. Not all questions will apply in all situations, and not all responses need to be positive ones - this is not a scorecard. The questions are intended to help you think critically about information sources.

### To evaluate authority:

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| **Ask the Questions** | **Find Answers** |
| Who is the author? | * Can you identify an author for the work? * Most common places to find authors' names listed:   + Title page (book or report)   + Title information at top of first page (articles, book chapters)   + End of the article (encyclopedias)   + Top or bottom of page (web pages) |
| What are the author's credentials?   * Relevant university degree * Institutional affiliation (where does he or she work?) * Relevant field or employment experience * Past writings | * Examine the item for information about the author * Look in [biographical sources](http://libweb.uoregon.edu/guides/biography/) * Look in directories, e.g.   + [Who's Who](http://janus.uoregon.edu/search/t?SEARCH=who%27s+who)   + [National Faculty Directory](http://janus.uoregon.edu/search/tnational+faculty+directory/tnational+faculty+directory/1,2,3,B/frameset&FF=tnational+faculty+directory&1,,2) * [Search the web](http://libweb.uoregon.edu/guides/searchweb/) for the author's home page * Search [article indexes](http://libweb.uoregon.edu/general/resources/articles.html) and the [online catalog](http://janus.uoregon.edu/search/X) for other works by the author |
| What is the author's reputation among his/her peers?   * Cited in articles, books or bibliographies on the topic * Mentioned in your textbook or by your professor | * Look in [annual reviews](http://metalib.uoregon.edu:8331/V/89L2XIK351ELB2IFPTXNHC78JPNTHUU65PSPKS9KKVNUMGLVMY-13028?func=native-link&resource=ORG00419) * Use citation indexes to find articles citing your author   + [Web of Science](http://libweb.uoregon.edu/dc/indexes/index.php?go=1&db=253%20of%20science) ([Social Science Citation Index](http://janus.uoregon.edu/search/tsocial+science+citation+index/tsocial+science+citation+index/1,2,2,B/frameset&FF=tsocial+science+citation+index&1,1,) and [Science Citation Index](http://janus.uoregon.edu/search/t?SEARCH=science+citation+index))   + [Arts & Humanities Search](http://libweb.uoregon.edu/dc/indexes/index.php?go=1&name=humanities%20search) |
| Who is the publisher?   * Commercial, trade, institutional, other * Known for quality and/or scholarly publications * Basic values or goals * Specialization * Editorial board * Blind review process | * Look in directories, e.g.   + [Writer's Market](http://janus.uoregon.edu/search/twriters+market/twriters+market/1,2,3,B/frameset&FF=twriters+market&1,1,)   + [Literary Marketplace](http://janus.uoregon.edu/search/tliterary+market+place/tliterary+market+place/1,2,2,B/frameset&FF=tliterary+market+place+the+directory+of+american+book+publishing&1,1,)   + [Directory of Corporate Affiliations](http://janus.uoregon.edu/search/t?SEARCH=directory+of+corporate+affiliations) * [Search the web](http://libweb.uoregon.edu/guides/searchweb/) for the publisher's web site * Look for editorial guidelines or author instructions in journals or on the publisher's web site |

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| Is the author associated with a reputable institution or organization?   * Organizational mission * Basic values or goals * National or international * Membership | * [Search the web](http://libweb.uoregon.edu/guides/searchweb/) for the organization's web site * Look in directories, e.g.   + [The Encyclopedia of Associations](http://janus.uoregon.edu/search/t?SEARCH=encyclopedia+of+associations)   + [Research Centers Directory](http://janus.uoregon.edu/search/tresearch+centers+directory/tresearch+centers+directory/1,2,5,B/frameset&FF=tresearch+centers+directory&3,,4) |

### To evaluate objectivity:

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| **Ask the Questions** | **Find Answers** |
| Does the author state the goals for this publication?   * Inform, explain, educate * Advocate * Persuade or dissuade * Sell a product or service * Serve as a soapbox | Read the foreword, preface, abstract and/or introduction |
| Does the author exhibit a particular bias?   * Commitment to a point of view * Acknowledgement of bias * Presentation of facts and arguments for both sides of a controversial issue * Language free of emotion-arousing words and bias | * Read the abstract and/or introduction * Examine the work for   + Inflammatory language   + Images or graphic styles (e.g., text in color or boldface type) to persuade you of the author's point of view   + [Propaganda](http://www.propagandacritic.com/)   + Author's arguments or supporting facts   + Author's conclusions   + Bibliography that includes multiple points of view |

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| Is the viewpoint of the author's affiliation reflected in the message or content?   * Organization's (e.g., government, university, business, association) point of view on the topic being discussed * Organization's mission and activities * Advertising is clearly labelled * Benefits to organization | * [Search the web](http://libweb.uoregon.edu/guides/searchweb/) for the organization's web site * Look in directories, e.g.   + [The Encyclopedia of Associations](http://janus.uoregon.edu/search/t?SEARCH=encyclopedia+of+associations)   + [Research Centers Directory](http://janus.uoregon.edu/search/tresearch+centers+directory/tresearch+centers+directory/1,2,5,B/frameset&FF=tresearch+centers+directory&3,,4) |
| Does the information appear to be valid and well-researched?   * Reasonable assumptions and conclusions * Arguments and conclusions supported by evidence * Opposing points of view addressed * Opinions not disguised as facts * Authoritative sources cited | * Verify [facts and statistics](http://libweb.uoregon.edu/guides/findstatistics/) with a reliable source * Examine cited sources for authority and objectivity |

### To evaluate quality:

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| **Ask the Questions** | **Find Answers** |
| Is the information well-organized?   * Logical structure * Main points clearly presented * Main ideas unified by overarching idea * Text flows well (not choppy or stilted) * Author's argument is not repetitive | * Look at the headings to indicate structure * Look for agreement among reviews   + [Magazines for Libraries](http://janus.uoregon.edu/search/t?SEARCH=magazines+for+libraries)   + [Ulrich's International Periodicals Directory](http://libproxy.uoregon.edu/login?url=http://www.ulrichsweb.com/)   + [Book reviews](http://libweb.uoregon.edu/guides/bookreview/)   + [Internet Scout Report](http://scout.wisc.edu/) |
| * Has the author used good grammar? * Are there spelling or typographical errors? | Read carefully for errors |
| Are the graphics (images, tables, charts, diagrams) appropriate and clearly presented?   * Clearly labelled * Descriptive title * Understandable without explanatory text | Consider other ways to [present the information](http://www.salon.com/march97/tufte970310.html) |
| Is the information complete and accurate?   * Facts and results agree with your own knowledge of the subject * Facts and results agree with those of other specialists in the field * **Documents sources** (a very important indicator of quality) * Describes methodology * Addresses theories and facts that may negate the main thesis * Avoids questionable assumptions | * Verify [facts and statistics](http://libweb.uoregon.edu/guides/findstatistics/) with a reliable source * Examine cited sources for authority and objectivity |

### To evaluate coverage:

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| **Ask the Questions** | **Find Answers** |
| Does the work update other sources? | Compare publication dates and content to other sources you have found |
| Does it substantiate other materials you have read, or add new information? | You should seek out multiple points of view and include a diversity of sources and ideas. |
| Have you found enough information to support your arguments? | Look for gaps in your arguments and evidence   * Facts * Statistics * Evidence |

### To evaluate currency:

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| **Ask the Questions** | **Find Answers** |
| When was it published? | * Look for a publication or copyright date on the   + Title page (books, journals)   + Reverse of the title page (books)   + Cover (journals, magazines, newspapers)   + Table of contents (journals, magazines)   + Bottom of the page (web sites) * Dates on web pages may indicate   + When the page was created   + When the page was published on the web   + When the page was last revised |
| Is your topic one that requires current information? | Topic areas requiring the most up-to-date information may include   * Science * Medicine * Current events |
| Has this source been revised, updated, or expanded in a subsequent edition? | Search catalogs and other databases for more recent editions   * [Worldcat](http://libweb.uoregon.edu/dc/indexes/index.php?go=1&db=220) * [Books In Print](http://libweb.uoregon.edu/dc/indexes/index.php?go=1&prefix=books) * [Amazon.com](http://www.amazon.com/) |

### To evaluate relevance:

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| **Ask the Questions** | **Find Answers** |
| Does the work address your research question or meet the requirments of your assignment? | Review your research question and/or assignment |
| Is the content appropriate for your research topic or assignment?   * [Scholarly vs. popular](http://libweb.uoregon.edu/guides/findarticles/distinguish.html) * Fact vs. opinion * Format/medium (e.g., book, journal, government report, web site, etc.) * Subject coverage * Language * Time period * Geographical area * Audience * [Primary](http://libweb.uoregon.edu/guides/history/primary.html) (e.g., raw data, diaries, literature, photographs, first-hand accounts of an event, research reports, etc.) vs. secondary (information that has been analyzed and interpreted, e.g., literary criticism, most books, review of an art show or play, etc.) vs. tertiary (sources that compile, analyze and digest secondary sources, e.g., [encyclopedias](http://libweb.uoregon.edu/guides/encyc/), [CQ Researcher](http://libproxy.uoregon.edu/login?url=http://library.cqpress.com/cqresearcher)) | * Check the table of contents or scan the subheadings * Read the preface, abstract, introduction, and/or conclusion * Look for footnotes or endnotes and/or a bibliography * Look for reviews   + [Magazines for Libraries](http://janus.uoregon.edu/search/t?SEARCH=magazines+for+libraries)   + [Ulrich's International Periodicals Directory](http://libproxy.uoregon.edu/login?url=http://www.ulrichsweb.com/)   + [Book reviews](http://libweb.uoregon.edu/guides/bookreview/)   + [Internet Scout Report](http://scout.wisc.edu/) |

## Further Reading

Ciolek, T.M. (1996). The six quests for the electronic grail: Current approaches to information quality in WWW resources. Retrieved 30 October 2004 from <http://www.ciolek.com/PAPERS/six-quests1996.html>

Standler, R.B. (2004, May 25). Evaluating credibility of information on the Internet. Retrieved 30 October 2004 from <http://www.rbs0.com/credible.pdf>

Stanford Persuasive Technology Lab. (2004). The web credibility project. Retrieved 30 October 2004 from <http://credibility.stanford.edu/>

Tillman, H.N. (2003, March). Evaluating quality on the net. Retrieved 30 October 2004 from <http://www.hopetillman.com/findqual.html>

## Acknowledgements

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* [Critically Analyzing Information Sources](http://www.library.cornell.edu/okuref/research/skill26.htm) (Cornell University)
* [Evaluating Web Pages: Techniques to Apply & Questions to Ask](http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Evaluate.html) (UC Berkeley)
* [Evaluating Web Resources](http://www3.widener.edu/Academics/Libraries/Wolfgram_Memorial_Library/Evaluate_Web_Pages/659/) (Jan Alexander and Marsha Ann Tate, Widener University)
* [The Good, the Bad, & the Ugly](http://lib.nmsu.edu/instruction/eval.html): or, Why It's a Good Idea to Evaluate Web Sources (Susan E. Beck, New Mexico State University)

This guide was originally written by Collen Bell. It is revised and maintained by Ted Smith, [tedsmith@uoregon.edu](mailto:tedsmith@uoregon.edu), University of Oregon Libraries. Last Modified: 05/19/2009